

provision of which the coroner's office was removed from election by popular vote and made appointive; the choice being made by the chief administrator's office, with the approval of the Board of Supervisors, recall being accomplished by the same sequence following conviction by open trial.

Under an arrangement with the University of California, much of the valuable material from the city morgue was taken to the University of California Museum, where it was mounted. On January 1, 1933, by further correlation with the University of California, utilization of the coroner's material for clinicopathological teaching began, and since that time clinicopathological conferences have been held at the San Francisco City and County Hospital, Mount Zion Hospital, French Hospital, and the University of California Hospital on cases previously seen in these institutions and subsequently autopsied at the coroner's office. This correlation of clinical and autopsy material has been of infinite benefit not only to students, but to the attending staffs of these hospitals, and has enabled the coroner's office to augment the protocols of these cases with complete clinical records.

In June, 1933, the city and county built and equipped for the coroner's department a museum room at the city morgue, for preservation of suitable material as evidence, and for the use and education of the office and its staff. In August, 1933, a complete Leica system was installed for routine photography, and a Bausch & Lomb bullet-comparison and hair-comparison microscope was purchased for use in the study of criminal cases. A dark room was built in the laboratory, with the usual developing and enlarging equipment set up in this space. The photographic material is filed numerically with the gross and microscopic findings.

By evolution in the six years just past, the coroner's system in San Francisco has become a singular example of the medico-legal phase of administration in city government. The coroner holds office by the same virtue that a medical examiner is appointed. He has the same power, except that his opinions are balanced by jury. Diagnosis rests not alone with the autopsy surgeon, but with the pathologist who checks the work done at the autopsy table, and the consulting chemist, who analyzes the organs. Through association with both the State University and the City Hospital, the coroner's material is used for teaching; and by this connection the coroner has the privilege of calling any of the staff of the University of California Pathological Department into consultation. The toxicologist remains unchanged and his work uncriticized.

SUGGESTIVE VALUE OF THE CHANGES MADE IN SAN FRANCISCO

The foregoing is offered, it must be realized, not as defense of an office, but rather as an invitation to the medical profession throughout the State to observe the changes and advantages possible under an operating coroner's system. That

such changes can occur with even greater facility outside of San Francisco than they have here should go without saying; but that these changes must be effected by the medical profession, both in the nomination of proper individuals to hold the position of coroner and in the appointment of adequately trained autopsy surgeons, is essential. At the present time the shift of the coroner's system to a medical-examining system in practically any county of California would result in no improvement of conditions, and possibly contribute to a state less desirable than that which now exists. The reason for this is, of course, that there are few adequately trained medico-legal investigators in the profession. We see this tragic ignorance manifest frequently in autopsies which are performed by physicians at the request of county coroners throughout the country. To handle the situation there must be members of each county group who have, at least, the fundamental training requisite to doing an intelligent pathological study on the human body; and they must add to this knowledge certain essential points in the detection and conviction of crime. Facilities for such education are at hand. The need is imminent, and the personnel certainly must be available.

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WHY THE MEDICAL EXAMINER, INSTEAD OF THE CORONER?

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II

DR. CARR'S opening sentence refers to a study made for the Committee on Medicolegal Problems of the National Research Council, the results of which study were published in 1928.¹ In 1932 there appeared the results of a further study² undertaken for the same committee of the National Research Council. The later study reviewed again the problem presented by the coroner's office in the United States, chiefly from the standpoints of how the work done by this office fits into the general field of legal medicine in this country, and how legal medicine should and might be developed.

In the discussion of possible future developments, attention was called to the fertile and promising field presented in certain states through the state university. A statement (pp. 73-76) by the president of the University of California re-

* From the office of the chairman of the Committee on Medicolegal Problems of the Institute of Medicine of Chicago.

† Editor's Note.—This is a companion article to Dr. Jesse L. Carr's paper on "The Coroner's System," printed on page 274.

See also letter from Doctor Schultz, printed in this issue, on page 317.

¹ Schultz, Oscar T., and Morgan, E. M.: The Coroner and the Medical Examiner. With a Supplement on Medical Testimony by E. M. Morgan. Bull. No. 64, National Research Council, Washington, D. C., 1928.

² Schultz, Oscar T.: Possibilities and Need for Development of Legal Medicine in the United States. With a Supplement on University Departments in the Field of Criminology. Bull. No. 87, National Research Council, Washington, D. C., 1932.

vealed a deep insight into the problems of legal medicine as they affect the people at large, and a broad vision of how these problems might be met through the University of California. In my discussion of the outlook in California I noted the change that had been made in the selection and tenure of office of coroner brought about by the new charter of San Francisco County. Furthermore, looking into the future, I wrote as follows (p. 76): "A coroner, freed of political alliances and entanglements, and serving for life or during good behavior, has presented to himself the opportunity of making of his office an efficient agency in the administration of justice. If he conducts his office in the proper coöperative spirit, he will find already organized in the medical schools of his community, and always ready to serve him, a type of scientific service that an elective coroner would find it difficult or impossible to duplicate. The change brought about by the new charter of San Francisco County should make the coroner's office an important factor in the developments that the president of the University of California has outlined."

PRESENT STATUS OF CORONER'S OFFICE IN SAN FRANCISCO

From what Doctor Carr has written about the present status of the coroner's office in San Francisco, it would appear that the prophecy made relative to that office has in large measure been borne out. Every physician and every nonmedical person interested in a better application of medical science in the administration of justice will applaud the good work done.

The prime factor in the better functioning of the office of coroner of San Francisco has undoubtedly been the removal of the office from the field of elective politics. This makes for continuity of service, increasing experience with each year of service, constructive development of the office, and better work in the interests of the public. More liberal financial support, which has made possible histopathologic, bacteriologic and toxicologic work and apparatus for other forms of medicolegal investigation, has been an important factor. But this, too, has its root in the fact that an appointive coroner can devote his thought and attention to improvement of the work of his office rather than to a political campaign for election or reelection. If every coroner's office in the country could be placed on the same basis as that of San Francisco, there would be little need to urge abolition of the office, although there are still some fundamental features, that will be discussed in a moment, which make the medical examiner system preferable to the coroner system. Complete reform of the latter requires more than making the coroner an appointive official.

INDICTMENT OF THE CORONER'S SYSTEM

In his opening reference to the National Research Council's 1928 report, Doctor Carr says that "the coroner's system was indicted in the United States." In the isolated instance of San Francisco the indictment may be quashed, but in practically every other jurisdiction it will have to

stand. Great improvement has been made in the functioning of the office of coroner of Hamilton County (Cincinnati), Ohio. This was done by electing a physician who was not a politician, and who did not seek the office; by his appointment of a competent coroner's pathologist under a statute that provides for such an official in the two largest counties of the state; by correlating the work of the office with that of the medical school of the University of Cincinnati, and by designating the well-equipped morgue of the Cincinnati General Hospital the official coroner's morgue. But the coroner of Hamilton County is still an elective official, and the incumbent of the office cannot much longer be expected to sacrifice his professional career for an obscure office from which he may be ousted by a petty politician in a political campaign. The coroner of Hamilton County, as the result of his experience, is a strong proponent of the medical examiner system. Outside San Francisco and Cincinnati, what has the coroner system to offer as a plea against the indictment that it is an inefficient, ineffective, and archaic agency of government?

SHOULD STATUTES GOVERNING CORONER'S SYSTEM BE CHANGED?

If Doctor Carr had limited himself to an exposition of the excellent progress made in the coroner's office of San Francisco, little comment would have been necessary other than to say, "Well done, keep up the good work." But Doctor Carr makes the good record of a single coroner's office the basis of an argument against adoption of the medical examiner system. He says "changing statutes is a long and tedious process." Changing statutes so that the counties of other states may do what San Francisco County has done may be an even more tedious process than a change that substitutes the medical examiner for the coroner. In a recent article,³ I have discussed the effects that modernized forms of county government, such as have been proposed in a number of localities, may have upon the coroner's office. I expressed the view that neither a reformed coroner system nor a medical examiner system will solve the medicolegal problems of rural counties.

Whether statutes have to be changed or not is not a valid argument either for retention of the coroner or his replacement by a medical examiner. Certainly a radical change of statute was necessary before the coroner of San Francisco County could be made an appointive official serving for an indefinite period. It was this fact of continuous nonpolitical service, not the fact that the title of the office was not changed by statute, that made improvement possible.

ANTIQUATED LAWS RESPONSIBLE FOR POOR CORONERS

Doctor Carr further says: "Doctors have been and will again be elected to this office without changing statutes or losing caste." Here, there, and elsewhere physicians have been elected and have served as coroners. Inasmuch as physicians

³ Schultz, Oscar T.: Reform in County Government and the Coroner's Office, *Am. J. Clin. Path.*, 5:316 (July), 1935.

are better educated and trained, they should be better coroners than the politician coroners of populous counties or the undertaker coroners of rural counties. But they are not good coroners—and this is said with all respect to those hard-working physicians who serve their communities as coroners. Coroners are poor officials, not because they may be physicians on the one hand, or incompetent laymen on the other, but because of the antiquated laws under which they must function. Again there arises a question of change of statutes. It is not the fact that the coroner of San Francisco may be a physician that alone has led to improved functioning of that office, but the fact that the coroner can look forward to continuous and constructive service. Given as coroner an honest, intelligent man, with good legal training and with sufficient foresight to place a qualified medical man in charge of the medical work and to give the latter proper facilities for scientific work, it is conceivable that such a coroner might do even more with the office *under the existing laws relating to that office*.

EFFICIENT MEDICAL EXAMINERS WOULD SOON BE SUPPLIED

As a further implied objection to the medical examiner system, Doctor Carr says: "The supply of good medical examiners is limited." This fact, like the others quoted, is granted. The coroner system, during the years that it has been in existence, has developed few experts in forensic medicine. Those who have become expert in this field have done so because of experience gained in other fields, and because of other connections that have made scientific work possible. The reason for the failure of the coroner system to develop a corps of experts is obvious. An elective office, with its frequent upheavals and turnovers, and its insecure tenure of office, does not attract well-trained young physicians into what should be an attractive and important subdivision of medical science. Lack of facilities for good work, and the general disrepute of the office of coroner in the past, are further deterrents.

If within a short space of time every coroner were made appointive, as has been done in San Francisco County, the dearth of men trained in medicolegal pathology would be as great as if, within the same period of time, the medical examiner system were to be universally adopted. If the coroner's office could be removed from politics and the tenure of coroner's physician made secure, or if—and this is equally important—a medical examiner system with secure tenure of office were universally adopted, men would be attracted into the field of legal medicine. Under such conditions offices like those of the coroner of San Francisco County, or those of the medical examiners of Boston, New York City, and Newark, would become centers for the training of experts. Our medical schools would be forced to establish schools or institutes of legal medicine, just as the increasing demand for full-time public health officers led to the establishment of institutes of hygiene and public health.

SUCCESS OF APPOINTIVE OFFICE IN SAN FRANCISCO AN ISOLATED EXAMPLE

Making the coroner an appointive official has led to great improvement in the office of coroner of San Francisco County. But the office has been appointive in a number of states for a longer period of time than has been the case in San Francisco, and this has led to no elevation of the character of the office. Removing the office from politics by making the coroner appointive will not cure all the evils of the office.

Every study has shown that one of the bad features of the office is the antiquated body of law under which the coroner must perform his duties. More is needed than a little tinkering here and there of the laws relating to the method of selection or other minor details. Such inexpert tinkering leaves the vehicle still a horse and buggy, and does not make of it a modern automobile. The entire body of laws relating to the office should be thoroughly revised and made to fit present-day conditions. In this respect the medical examiner system has a distinct advantage. Where that system has been adopted an entirely new law has been written, and this more clearly defines the duties and authority of the medical examiner than does any statute relating to the coroner.

EVIL OF THE CORONER'S INQUEST

There is left still one more evil which, to my mind, is the worst of all. I refer to the coroner's inquest before a jury. The coroner's inquest is a magisterial or quasijudicial proceeding, which is useless and often pernicious in that it duplicates and often impedes the work of other established and more competent agencies. With this view Doctor Carr evidently does not agree because he says, in contrasting the coroner with the medical examiner, "his opinions are balanced by jury." If coroner's juries in San Francisco are anything like the usual jury in Chicago or Cleveland or Cincinnati or Philadelphia or anywhere else, I question whether a man capable of forming a scientific opinion would want his opinion balanced by such a jury, or whether it is advantageous to the community to have such a balance.

PROPER MEDICOLEGAL MEDICINE NEEDED IN AMERICA

What this country needs to place legal medicine on the high plane of this discipline in countries other than those influenced by English law, is an agency for the investigation of certain classes of deaths clearly specified by law. The investigation should be of the dead body for the purpose of determining in as accurate and scientific a manner as possible the cause of death, and of any material that may yield information relative to the circumstances surrounding death. Such an investigation is wholly a function of medical science and of a medical science that can make use of all the auxiliary sciences whenever necessary. All other investigations which have to do with the detection, apprehension and punishment of those who may have a criminal or negligent responsibility for death should be left to police agencies,

the grand jury, the prosecutor and the courts. Under such a system medical science does those things which it alone can do and does only those things. The agency for such an application of medical science in the administration of justice is, in effect, the medical examiner. The latter should be a medical scientist, not a magistrate of the caliber of a rural justice of the peace, or a detective or a policeman or a partisan ally of the prosecutor.

MEDICAL EXAMINER SYSTEM HAS PROVED SUPERIOR TO THE CORONER'S SYSTEM

The adoption of the medical examiner system does not by any means solve all the medicolegal problems of an American community. But that system has proved its superiority over the coroner system in those jurisdictions where it has been tried. In rural communities—and it is to be noted that in such communities it has been used only in Massachusetts under a law passed in 1877—the medical examiner system is better than the coroner system, but still leaves something to be desired. One of the fundamental errors of the coroner system is that a purely rural English office was adopted for, but not adapted to, all of the various kinds of communities that exist in the United States. The same mistake should not be made in attempting to improve the present state of affairs. But in rural as well as in urban jurisdictions, in agricultural as well as in industrial counties, the fundamental medicolegal problem is scientific medical examination. How this is to be obtained for rural governmental units is a problem for the political scientists, but one for whose solution the best advice of the medical profession will be necessary. With adequate financial support the medicolegal agency of a large city can develop its own scientific departments. Scientific medicolegal service for rural counties will probably require the establishment of such state medicolegal institutes as have been recommended by the American Medical Association and the American Bar Association.

IN CONCLUSION

In conclusion, I do not wish to be understood as in any way criticizing the office of coroner of San Francisco County. On the contrary, I wholeheartedly applaud the improvement that has been made in that office since the National Research Council's study of 1928. But that office, like every other coroner's office in the United States, still operates under the handicap of archaic laws. A change of statute law was necessary to bring about such improvement as has occurred in San Francisco. Other changes in laws will be necessary before the office can become a first-class medicolegal agency. Change of statutes is, therefore, no valid argument against adoption of the medical examiner system.

I have had the privilege of reading, in advance of its publication, Doctor Carr's article in proof, and I appreciate having been asked to comment upon it.

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THE LIVER IN RELATION TO THE SURGICAL TREATMENT OF LESIONS OF THE EXTRAHEPATIC BILE DUCTS*

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DISCUSSION by Clarence G. Toland, M. D., Los Angeles;
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IN a general way it has been known for many years that disturbances in the biliary apparatus influence materially the functions of the liver; however, not until during the past decade, or thereabouts, has there developed a very definite understanding of the various disturbances of the hepatic functions. The pathology of organic diseases in the liver has long been well known, and surgeons have been cognizant of the hazards and the increased risk of surgical operations not only as they were instituted upon the biliary tract but, if instituted elsewhere in the body, in patients in whom one of the various types of cirrhosis was present, or in patients in whom gross pathologic changes in the liver of one kind or another had occurred. Surgeons have recognized for many years that deep, prolonged obstructive jaundice presented distinct hazards to surgical operations upon the biliary tract, and they also recognized certain manifestations resulting from such obstructive jaundice which they were unable to adequately explain or combat. Halsted was one of the first to direct attention to the danger and the high mortality attending operations upon the biliary tract in the presence of deep, prolonged obstructive jaundice where at operation the content of the dilated common duct was a colorless, thin watery material, entirely devoid of bile pigment, which became more thin and watery after drainage was instituted. Likewise, surgeons have for many years recognized the tendency to operative and postoperative bleeding in patients with prolonged obstructive jaundice.

VALUE OF RECENT LIVER STUDIES

During recent years investigative work has contributed much to a better understanding of the normal functions of the liver, and the alterations in the functional activity of the liver in the presence of pathologic conditions or states in which the liver is either directly or indirectly involved. Much has evolved which has been purely of scientific interest, but much of the knowledge that has been derived from the investigative efforts of the physiologists in particular has become of immeasurable value in its practical application, and through which have evolved certain relative tests of liver function and the development of preoperative therapeutic procedures. These have materially increased the safety with which patients in whom marked disturbances in hepatic function have occurred may be operated upon.

* Read before the joint meeting of Medicine, Surgery, Pathology and Bacteriology, and Obstetrics and Gynecology sections of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13 to 16, 1935.